ASRock

QC7000M / QC6000M

User Manual

Version 1.0
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Contents

Chapter 1 Introduction

Thank you for purchasing ASRock QC7000M / QC6000M motherboard, a reliable motherboard produced under ASRock's consistently stringent quality control. It delivers excellent performance with robust design conforming to ASRock's commitment to quality and endurance.

In this manual, Chapter 1 and 2 contains the introduction of the motherboard and step-by-step installation guides. Chapter 3 contains the operation guide of the software and utilities. Chapter 4 contains the configuration guide of the BIOS setup.

Because the motherboard specifications and the BIOS software might be updated, the content of this manual will be subject to change without notice. In case any modifications of this manual occur, the updated version will be available on ASRock's website without further notice. If you require technical support related to this motherboard, please visit our website for specific information about the model you are using. You may find the latest VGA cards and CPU support list on ASRock's website as well. ASRock website http://www.asrock.com.

1.1 Package Contents

- ASRock QC7000M / QC6000M Motherboard (Micro ATX Form Factor)
- ASRock QC7000M / QC6000M Quick Installation Guide
- ASRock QC7000M / QC6000M Support CD
- 2 x Serial ATA (SATA) Data Cables (Optional)
- 1 x I/O Panel Shield

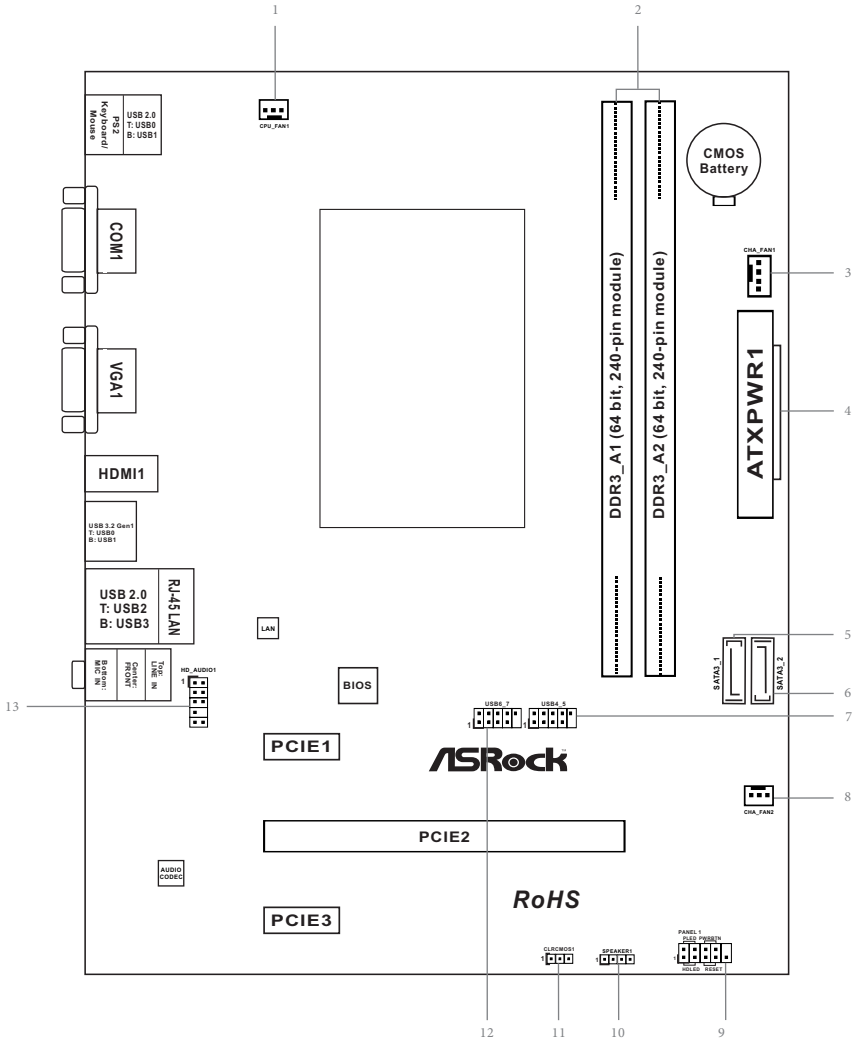
1.2 Specifications

Platform	• Micro ATX Form Factor • Solid Capacitor design • High Density Glass Fabric PCB
CPU	• AMD FT3b Carrizo-L E2-7110 Quad-Core APU **(for QC7000M)** • AMD FT3b Beema E2-6110 Quad-Core APU **(for QC6000M)**
Chipset	• SOC
Memory	• 2 x DDR3 DIMM Slots • Supports DDR3 1600/1333 non-ECC, un-buffered memory • Max. capacity of system memory: 32GB * Please refer to Memory Support List on ASRock's website for more information. (http://www.asrock.com/)
Expansion Slot	• 1 x PCI Express 2.0 x16 Slot (PCIE2: x4 mode) • 2 x PCI Express 2.0 x1 Slot
Graphics	• Integrated AMD Radeon™ R2 Graphics • DirectX 12, Pixel Shader 5.0 **(for QC7000M)** • DirectX 11.1, Pixel Shader 5.0 **(for QC6000M)** • Dual graphics output: support D-Sub and HDMI ports by independent display controllers • Supports HDMI 1.4 with max. resolution up to 3200x1800@60 Hz or 4096x2160@24 Hz • Supports D-Sub with max. resolution up to 1920x1200@60Hz • Supports HDCP 1.4 with HDMI 1.4 Port
Audio	• 7.1 CH HD Audio (Realtek ALC887 Audio Codec) • Supports Surge Protection • ELNA Audio Caps
LAN	• PCIE x1 Gigabit LAN 10/100/1000 Mb/s • Realtek RTL8111H • Supports Wake-On-LAN • Supports Lightning/ESD Protection • Supports Energy Efficient Ethernet 802.3az • Supports PXE

Rear Panel I/O	• 1 x PS/2 Mouse/Keyboard Port • 1 x Serial Port: COM1 • 1 x D-Sub Port • 1 x HDMI Port • 4 x USB 2.0 Ports (Supports ESD Protection) • 2 x USB 3.2 Gen1 Ports (Supports ESD Protection) • 1 x RJ-45 LAN Port with LED (ACT/LINK LED and SPEED LED) • HD Audio Jacks: Line in / Front Speaker / Microphone
Storage	• 2 x SATA3 6.0 Gb/s Connectors, support NCQ, AHCI and Hot Plug
Connector	• 1 x CPU Fan Connector (3-pin) • 2 x Chassis Fan Connectors (1 x 4-pin, 1 x 3-pin) • 1 x 24 pin ATX Power Connector • 1 x Front Panel Audio Connector • 2 x USB 2.0 Headers (Support 4 USB 2.0 ports) (Supports ESD Protection)
BIOS Feature	• AMI UEFI Legal BIOS with multilingual GUI support • Supports "Plug and Play" • ACPI 1.1 compliance wake up events • SMBIOS 2.3.1 support • DRAM Voltage multi-adjustment
Hardware Monitor	• CPU/Chassis temperature sensing • CPU/Chassis Fan Tachometer • CPU/Chassis Quiet Fan • CPU/Chassis Fan multi-speed control • Voltage monitoring: +12V, +5V, +3.3V, Vcore
OS	• Microsoft® Windows® 10 64-bit
Certifications	• FCC, CE • ErP/EuP ready (ErP/EuP ready power supply is required)

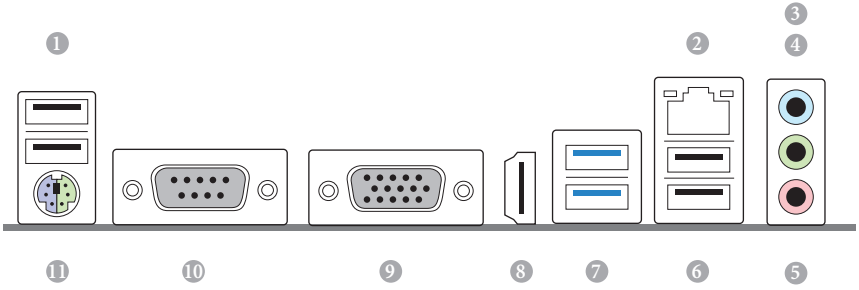
** For detailed product information, please visit our website: http://www.asrock.com*

1.3 Motherboard Layout



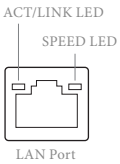
No.	Description
1	CPU Fan Connector (CPU_FAN1)
2	2 x 240-pin DDR3 DIMM Slots (DDR3_A1, DDR3_A2)
3	Chassis Fan Connector (CHA_FAN1)
4	ATX Power Connector (ATXPWR1)
5	SATA3 Connector (SATA3_1)
6	SATA3 Connector (SATA3_2)
7	USB 2.0 Header (USB4_5)
8	Chassis Fan Connector (CHA_FAN2)
9	System Panel Header (PANEL1)
10	Chassis Speaker Header (SPEAKER1)
11	Clear CMOS Jumper (CLRCMOS1)
12	USB 2.0 Header (USB6_7)
13	Front Panel Audio Header (HD_AUDIO1)

1.4 I/O Panel



No.	Description	No.	Description
1	USB 2.0 Ports (USB01)	7	USB 3.2 Gen1 Ports (USB3_0_1)
2	LAN RJ-45 Port*	8	HDMI Port
3	Line In (Light Blue)	9	D-Sub Port
4	Front Speaker (Lime)	10	COM Port
5	Microphone (Pink)	11	PS/2 Mouse/Keyboard Port
6	USB 2.0 Ports (USB_2_3)		

** There are two LEDs on each LAN port. Please refer to the table below for the LAN port LED indications.*



Activity / Link LED		Speed LED	
Status	**Description**	**Status**	**Description**
Off	No Link	Off	10Mbps connection
Blinking	Data Activity	Orange	100Mbps connection
On	Link	Green	1Gbps connection

Chapter 2 Installation

This is a Micro ATX form factor motherboard. Before you install the motherboard, study the configuration of your chassis to ensure that the motherboard fits into it.

Pre-installation Precautions

Take note of the following precautions before you install motherboard components or change any motherboard settings.

- Make sure to unplug the power cord before installing or removing the motherboard. Failure to do so may cause physical injuries to you and damages to motherboard components.
- In order to avoid damage from static electricity to the motherboard's components, NEVER place your motherboard directly on a carpet. Also remember to use a grounded wrist strap or touch a safety grounded object before you handle the components.
- Hold components by the edges and do not touch the ICs.
- Whenever you uninstall any components, place them on a grounded anti-static pad or in the bag that comes with the components.
- When placing screws to secure the motherboard to the chassis, please do not over-tighten the screws! Doing so may damage the motherboard.

2.1 Installing the System Fan

Please install the motherboard into a case with good airflow. Although the CPU is covered by a pre-installed heatsink which allows advanced heat dissipation, it is highly recommended to use system fan(s) to increase the cooling efficiency.

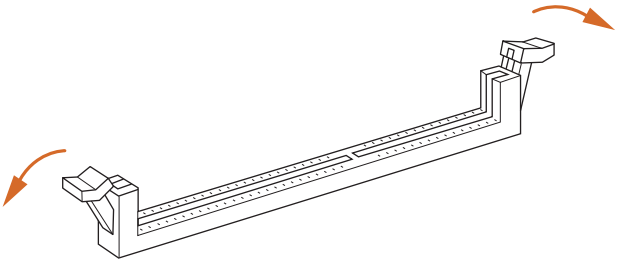
2.2 Installing Memory Modules (DIMM)

This motherboard provides two 240-pin DDR3 (Double Data Rate 3) DIMM slots.

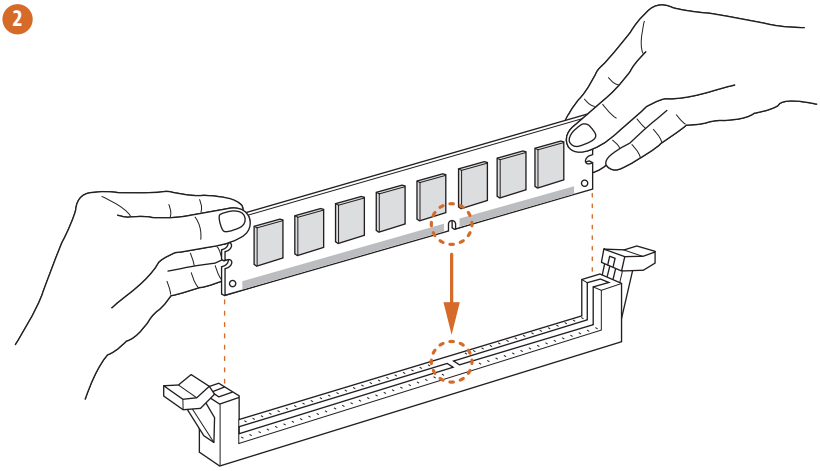
It is not allowed to install a DDR or DDR2 memory module into a DDR3 slot; otherwise, this motherboard and DIMM may be damaged.

The DIMM only fits in one correct orientation. It will cause permanent damage to the motherboard and the DIMM if you force the DIMM into the slot at incorrect orientation.

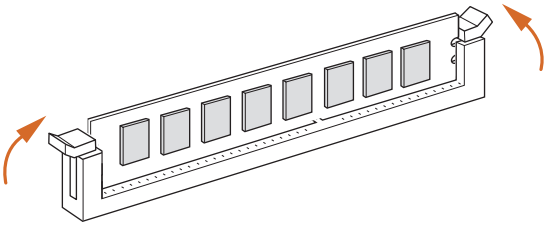
1



2



3



English

2.3 Expansion Slots (PCI Express Slots)

There are 3 PCI Express slots on the motherboard.

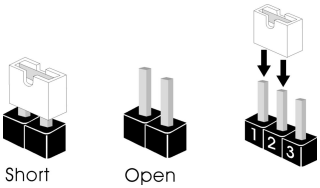
Before installing an expansion card, please make sure that the power supply is switched off or the power cord is unplugged. Please read the documentation of the expansion card and make necessary hardware settings for the card before you start the installation.

PCIe slots:

PCIE1 (PCIe 2.0 x1 slot) is used for PCI Express x1 lane width cards.
PCIE2 (PCIe 2.0 x16 slot) is used for PCI Express x4 lane width graphics cards.
PCIE3 (PCIe 2.0 x1 slot) is used for PCI Express x1 lane width cards.

2.4 Jumpers Setup

The illustration shows how jumpers are setup. When the jumper cap is placed on the pins, the jumper is “Short”. If no jumper cap is placed on the pins, the jumper is “Open”. The illustration shows a 3-pin jumper whose pin1 and pin2 are “Short” when a jumper cap is placed on these 2 pins.



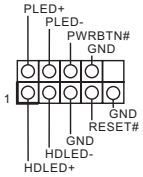
Clear CMOS Jumper (CLRCMOS1) (see p.4, No. 11)	 Default	 Clear CMOS

CLRCMOS1 allows you to clear the data in CMOS. To clear and reset the system parameters to default setup, please turn off the computer and unplug the power cord from the power supply. After waiting for 15 seconds, use a jumper cap to short pin2 and pin3 on CLRCMOS1 for 5 seconds. However, please do not clear the CMOS right after you update the BIOS. If you need to clear the CMOS when you just finish updating the BIOS, you must boot up the system first, and then shut it down before you do the clear-CMOS action. Please be noted that the password, date, time, and user default profile will be cleared only if the CMOS battery is removed.

2.5 Onboard Headers and Connectors

Onboard headers and connectors are NOT jumpers. Do NOT place jumper caps over these headers and connectors. Placing jumper caps over the headers and connectors will cause permanent damage to the motherboard.

System Panel Header
(9-pin PANEL1)
(see p.4, No. 9)



Connect the power switch, reset switch and system status indicator on the chassis to this header according to the pin assignments below. Note the positive and negative pins before connecting the cables.

PWRBTN (Power Switch):
Connect to the power switch on the chassis front panel. You may configure the way to turn off your system using the power switch.

RESET (Reset Switch):
Connect to the reset switch on the chassis front panel. Press the reset switch to restart the computer if the computer freezes and fails to perform a normal restart.

PLED (System Power LED):
Connect to the power status indicator on the chassis front panel. The LED is on when the system is operating. The LED keeps blinking when the system is in S3 sleep state. The LED is off when the system is in S4 sleep state or powered off (S5).

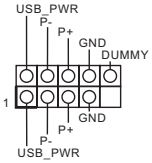
HDLED (Hard Drive Activity LED):
Connect to the hard drive activity LED on the chassis front panel. The LED is on when the hard drive is reading or writing data.

The front panel design may differ by chassis. A front panel module mainly consists of power switch, reset switch, power LED, hard drive activity LED, speaker and etc. When connecting your chassis front panel module to this header, make sure the wire assignments and the pin assignments are matched correctly.

Serial ATA3 Connectors
(SATA3_1:
see p.4, No. 5)
(SATA3_2:
see p.4, No. 6)

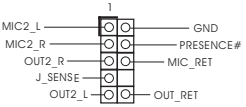
These two SATA3 connectors support SATA data cables for internal storage devices with up to 6.0 Gb/s data transfer rate.

USB 2.0 Headers
(9-pin USB4_5)
(see p.4, No. 7)
(9-pin USB6_7)
(see p.4, No. 12)



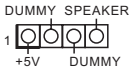
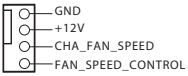
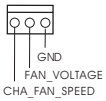
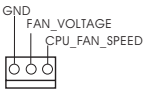
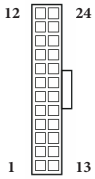
There are two headers on this motherboard. Each USB 2.0 header can support two ports.

Front Panel Audio Header
(9-pin HD_AUDIO1)
(see p.4, No. 13)



This header is for connecting audio devices to the front audio panel.

1. *High Definition Audio supports Jack Sensing, but the panel wire on the chassis must support HDA to function correctly. Please follow the instructions in our manual and chassis manual to install your system.*
2. *If you use an AC'97 audio panel, please install it to the front panel audio header by the steps below:*
   A. Connect Mic_IN (MIC) to MIC2_L.
   B. Connect Audio_R (RIN) to OUT2_R and Audio_L (LIN) to OUT2_L.
   C. Connect Ground (GND) to Ground (GND).
   D. MIC_RET and OUT_RET are for the HD audio panel only. You don't need to connect them for the AC'97 audio panel.
   E. To activate the front mic, go to the "FrontMic" Tab in the Realtek Control panel and adjust "Recording Volume".

Chassis Speaker Header (4-pin SPEAKER1) (see p.4, No. 10)		Please connect the chassis speaker to this header.
Chassis Fan Connectors (4-pin CHA_FAN1) (see p.4, No. 3) (3-pin CHA_FAN2) (see p.4, No. 8)	 	Please connect fan cables to the fan connectors and match the black wire to the ground pin.
CPU Fan Connector (3-pin CPU_FAN1) (see p.4, No. 1)		Please connect fan cables to the fan connectors and match the black wire to the ground pin.
ATX Power Connector (24-pin ATXPWR1) (see p.4, No. 4)		This motherboard provides a 24-pin ATX power connector. To use a 20-pin ATX power supply, please plug it along Pin 1 and Pin 13.

English

Chapter 3 Software and Utilities Operation

3.1 Installing Drivers

The Support CD that comes with the motherboard contains necessary drivers and useful utilities that enhance the motherboard's features.

Running The Support CD

To begin using the support CD, insert the CD into your CD-ROM drive. The CD automatically displays the Main Menu if "AUTORUN" is enabled in your computer. If the Main Menu does not appear automatically, locate and double click on the file "ASRSETUP.EXE" in the Support CD to display the menu.

Drivers Menu

The drivers compatible to your system will be auto-detected and listed on the support CD driver page. Please click **Install All** or follow the order from top to bottom to install those required drivers. Therefore, the drivers you install can work properly.

Utilities Menu

The Utilities Menu shows the application software that the motherboard supports. Click on a specific item then follow the installation wizard to install it.

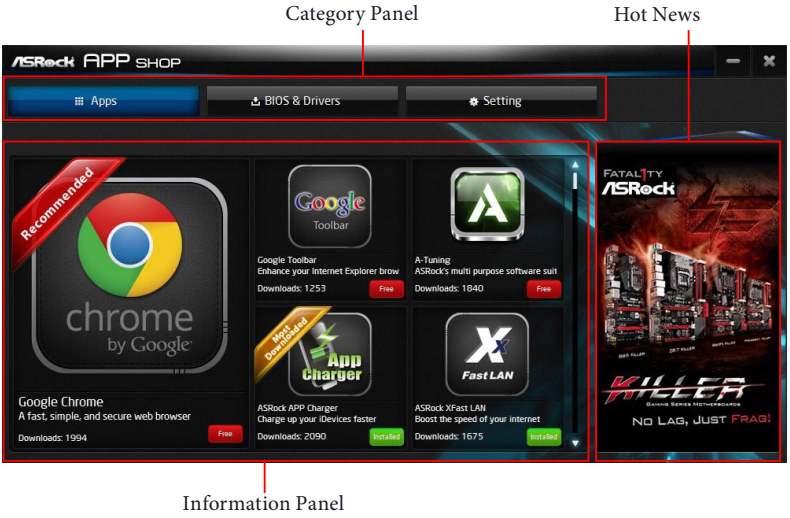
3.2 ASRock Live Update & APP Shop

The ASRock Live Update & APP Shop is an online store for purchasing and downloading software applications for your ASRock computer. You can quickly and easily install various apps and support utilities.With ASRock Live Update & APP Shop, you can optimize your system and keep your motherboard up to date simply with a few clicks.

Double-click  on your desktop to access ASRock Live Update & APP Shop utility.

**You need to be connected to the Internet to download apps from the ASRock Live Update & APP Shop.*

3.2.1 UI Overview



Category Panel: The category panel contains several category tabs or buttons that when selected the information panel below displays the relative information.

Information Panel: The information panel in the center displays data about the currently selected category and allows users to perform job-related tasks.

Hot News: The hot news section displays the various latest news. Click on the image to visit the website of the selected news and know more.

3.2.2 Apps

When the "Apps" tab is selected, you will see all the available apps on screen for you to download.

Installing an App

Step 1

Find the app you want to install.

The most recommended app appears on the left side of the screen. The other various apps are shown on the right. Please scroll up and down to see more apps listed.

You can check the price of the app and whether you have already intalled it or not.

Free - The red icon displays the price or "Free" if the app is free of charge.

Installed - The green "Installed" icon means the app is installed on your computer.

Step 2

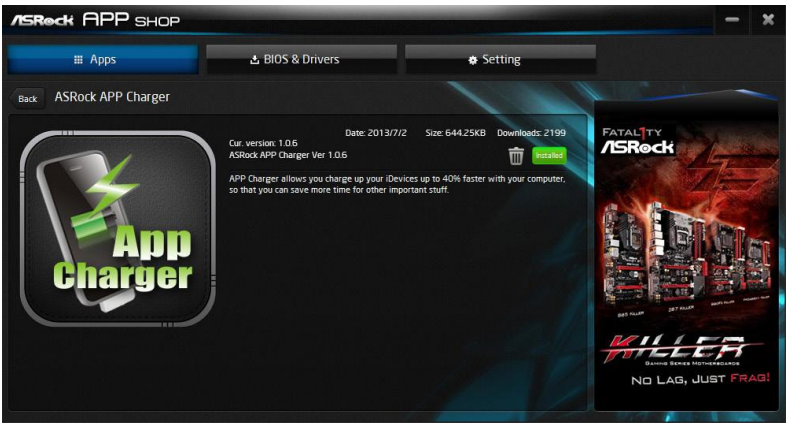
Click on the app icon to see more details about the selected app.

Step 3

If you want to install the app, click on the red icon Free to start downloading.

Step 4

When installation completes, you can find the green "Installed" icon appears on the upper right corner.



To uninstall it, simply click on the trash can icon .
*The trash icon may not appear for certain apps.

English

Upgrading an App

You can only upgrade the apps you have already installed. When there is an available new version for your app, you will find the mark of "New Version" 

appears below the installed app icon.

Step 1

Click on the app icon to see more details.

Step 2

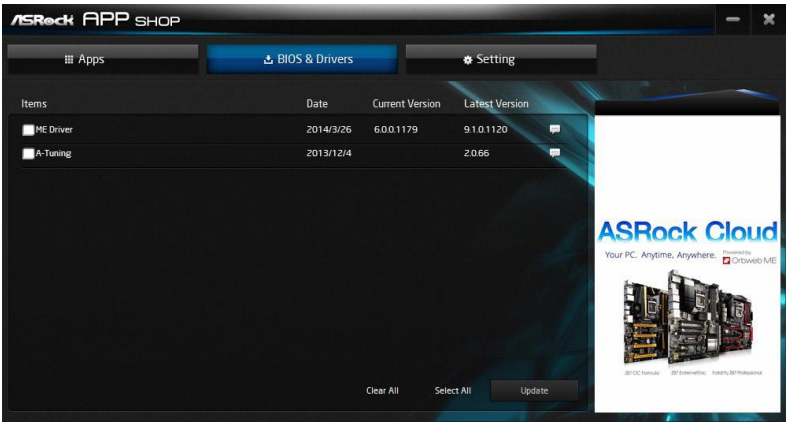
Click on the yellow icon 

to start upgrading.

3.2.3 BIOS & Drivers

Installing BIOS or Drivers

When the "BIOS & Drivers" tab is selected, you will see a list of recommended or critical updates for the BIOS or drivers. Please update them all soon.



Step 1

Please check the item information before update. Click on to see more details.

Step 2

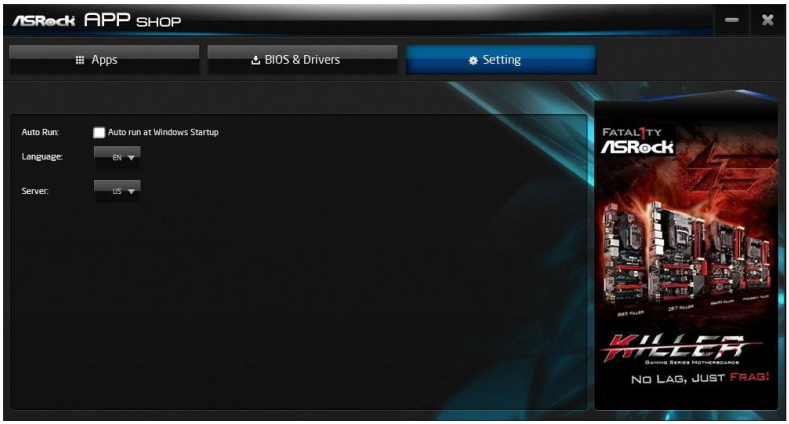
Click to select one or more items you want to update.

Step 3

Click Update to start the update process.

3.2.4 Setting

In the "Setting" page, you can change the language, select the server location, and determine if you want to automatically run the ASRock Live Update & APP Shop on Windows startup.



Chapter 4 UEFI SETUP UTILITY

4.1 Introduction

ASRock Interactive UEFI is a blend of system configuration tools, cool sound effects and stunning visuals. Not only will it make BIOS setup less difficult but also a lot more amusing. This section explains how to use the UEFI SETUP UTILITY to configure your system. You may run the UEFI SETUP UTILITY by pressing <F2> or <Del> right after you power on the computer, otherwise, the Power-On-Self-Test (POST) will continue with its test routines. If you wish to enter the UEFI SETUP UTILITY after POST, restart the system by pressing <Ctl> + <Alt> + <Delete>, or by pressing the reset button on the system chassis. You may also restart by turning the system off and then back on.

Because the UEFI software is constantly being updated, the following UEFI setup screens and descriptions are for reference purpose only, and they may not exactly match what you see on your screen.

4.1.1 UEFI Menu Bar

The top of the screen has a menu bar with the following selections:

Main	For setting system time/date information
OC Tweaker	For overclocking configurations
Advanced	For advanced system configurations
Tool	Useful tools
H/W Monitor	Displays current hardware status
Boot	For configuring boot settings and boot priority
Security	For security settings
Exit	Exit the current screen or the UEFI Setup Utility

4.1.2 Navigation Keys

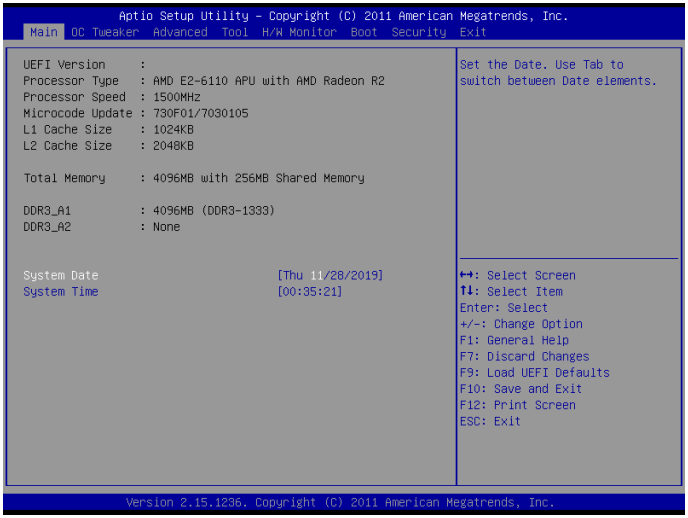
Use <←> key or <→> key to choose among the selections on the menu bar, and use < ↑ > key or < ↓ > key to move the cursor up or down to select items, then press <Enter> to get into the sub screen. You can also use the mouse to click your required item.

Please check the following table for the descriptions of each navigation key.

Navigation Key(s)	Description
+ / -	To change option for the selected items
<Tab>	Switch to next function
<PGUP>	Go to the previous page
<PGDN>	Go to the next page
<HOME>	Go to the top of the screen
<END>	Go to the bottom of the screen
<F1>	To display the General Help Screen
<F7>	Discard changes and exit the SETUP UTILITY
<F9>	Load optimal default values for all the settings
<F10>	Save changes and exit the SETUP UTILITY
<F12>	Print screen
<ESC>	Jump to the Exit Screen or exit the current screen

4.2 Main Screen

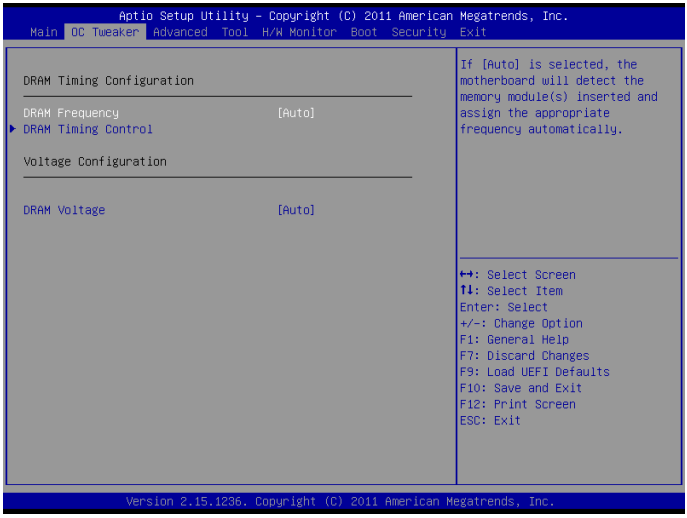
When you enter the UEFI SETUP UTILITY, the Main screen will appear and display the system overview.



English

4.3 OC Tweaker Screen

In the OC Tweaker screen, you can set up overclocking features.



Because the UEFI software is constantly being updated, the following UEFI setup screens and descriptions are for reference purpose only, and they may not exactly match what you see on your screen.

DRAM Timing Configuration

DRAM Frequency

If [Auto] is selected, the motherboard will detect the memory module(s) inserted and assign the appropriate frequency automatically.

DRAM Timing Control

Power Down Enable

Use this item to enable or disable DDR power down mode.

Bank Interleaving

Interleaving allows memory accesses to be spread out over banks on the same node, or accross nodes, decreasing access contention.

CAS# Latency (tCL)

The time between sending a column address to the memory and the beginning of the data in response.

RAS# to CAS# Delay (tRCD)

The number of clock cycles required between the opening of a row of memory and accessing columns within it.

Row Precharge Time (tRP)

The number of clock cycles required between the issuing of the precharge command and opening the next row.

RAS# Active Time (tRAS)

The number of clock cycles required between a bank active command and issuing the precharge command.

Command Rate (CR)

The delay between when a memory chip is selected and when the first active command can be issued.

RAS# Cycle Time (tRC)

Use this item to change RAS# Cycle Time (tRC) Auto/Manual setting.

Write Recovery Time (tWR)

The amount of delay that must elapse after the completion of a valid write operation, before an active bank can be precharged.

Refresh Cycle Time (tRFC)

The number of clocks from a Refresh command until the first Activate command to the same rank.

RAS to RAS Delay (tRRD)

The number of clocks between two rows activated in different banks of the same rank.

Write to Read Delay (tWTR)

The number of clocks between the last valid write operation and the next read command to the same internal bank.

Read to Precharge (tRTP)

The number of clocks that are inserted between a read command to a row precharge command to the same rank.

Four Activate Window (tFAW)

The time window in which four activates are allowed the same rank.

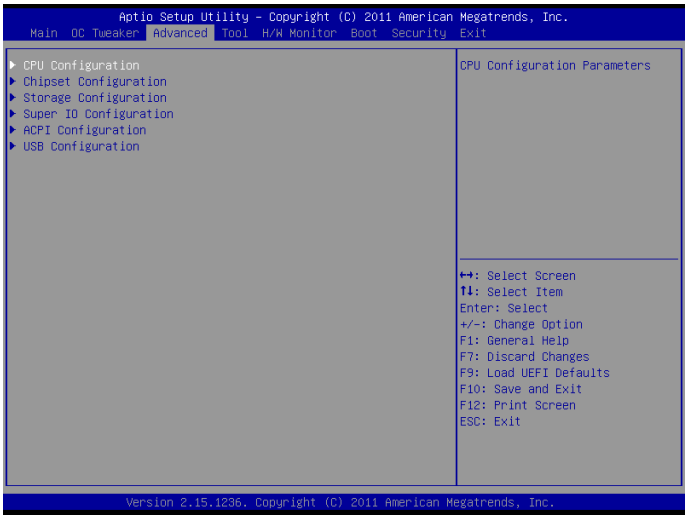
Voltage Configuration

DRAM Voltage

Use this to select DRAM Voltage. The default value is [Auto].

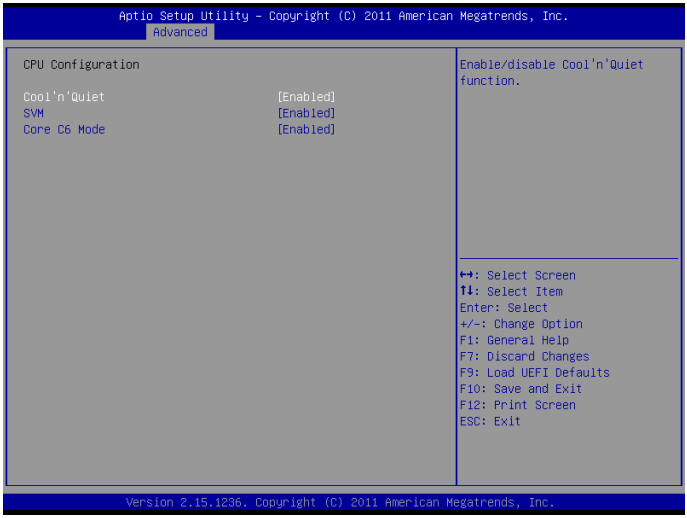
4.4 Advanced Screen

In this section, you may set the configurations for the following items: CPU Configuration, Chipset Configuration, Storage Configuration, Super IO Configuration, ACPI Configuration and USB Configuration.



Setting wrong values in this section may cause the system to malfunction.

4.4.1 CPU Configuration



Cool 'n' Quiet

Use this item to enable or disable AMD's Cool 'n' Quiet™ technology. The default value is [Enabled]. Configuration options: [Enabled] and [Disabled]. If you install Windows® OS and want to enable this function, please set this item to [Enabled]. Please note that enabling this function may reduce CPU voltage and memory frequency, and lead to system stability or compatibility issue with some memory modules or power supplies. Please set this item to [Disable] if above issue occurs.

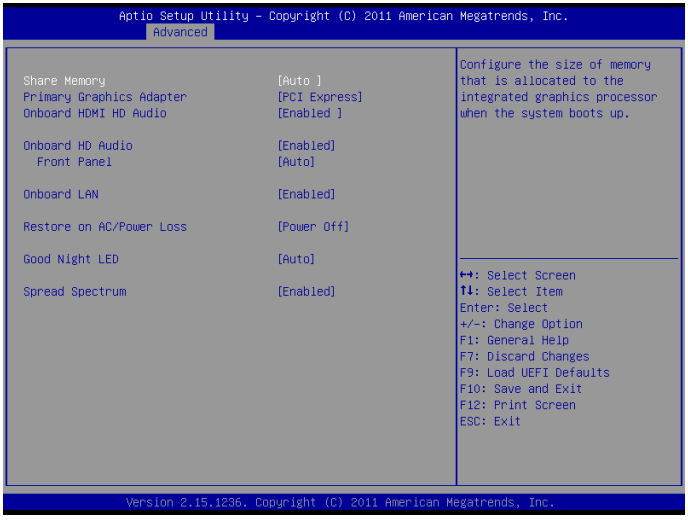
SVM

When this option is set to [Enabled], a VMM (Virtual Machine Architecture) can utilize the additional hardware capabilities provided by AMD-V. The default value is [Enabled]. Configuration options: [Enabled] and [Disabled].

Core C6 Mode

Use this item to enable or disable Core C6 mode. The default value is [Enabled].

4.4.2 Chipset Configuration



Share Memory

Configure the size of memory that is allocated to the integrated graphics processor when the system boots up.

Primary Graphics Adapter

Select a primary VGA.

Onboard HDMI HD Audio

Enable audio for the onboard digital outputs.

Onboard HD Audio

Enable/disable onboard HD audio. Set to Auto to enable onboard HD audio and automatically disable it when a sound card is installed.

Front Panel

Enable/disable front panel HD audio.

Onboard LAN

Enable or disable the onboard network interface controller.

Restore on AC/Power Loss

Select the power state after a power failure. If [Power Off] is selected, the power will remain off when the power recovers. If [Power On] is selected, the system will start to boot up when the power recovers.

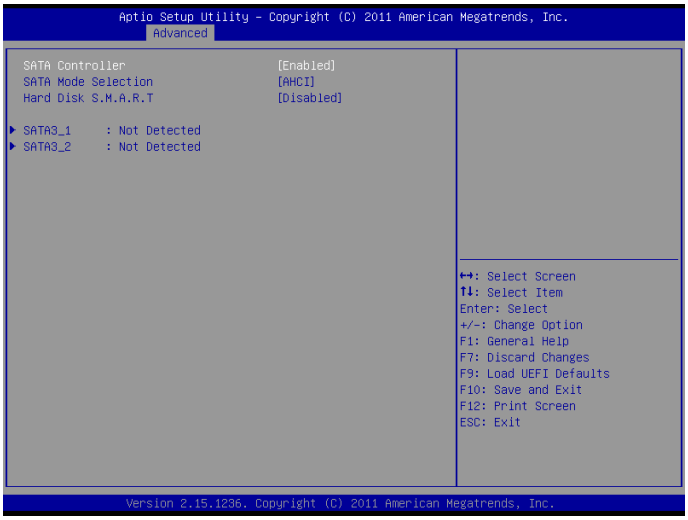
Good Night LED

By enabling Good Night LED, the Power/LAN LEDs will be switched off when the system is on. It will also automatically switch off the Power and LAN LEDs when the system enters into Standby/Hibernation mode.

Spread Spectrum

Enable Spread Spectrum to reduce electromagnetic interference for passing EMI tests.

4.4.3 Storage Configuration



SATA Controller(s)

Enable/disable the SATA controllers.

SATA Mode Selection

IDE: For better compatibility.

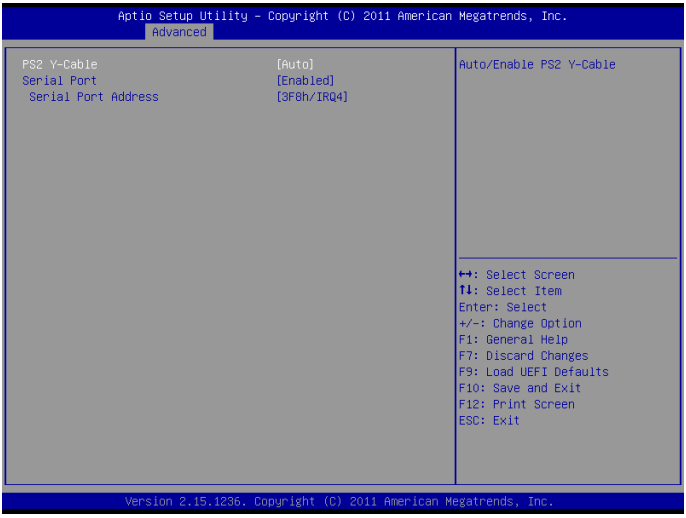
AHCI: Supports new features that improve performance.

AHCI (Advanced Host Controller Interface) supports NCQ and other new features that will improve SATA disk performance but IDE mode does not have these advantages.

Hard Disk S.M.A.R.T.

S.M.A.R.T stands for Self-Monitoring, Analysis, and Reporting Technology. It is a monitoring system for computer hard disk drives to detect and report on various indicators of reliability.

4.4.4 Super IO Configuration



PS2 Y-Cable

Enable the PS2 Y-Cable or set this option to Auto.

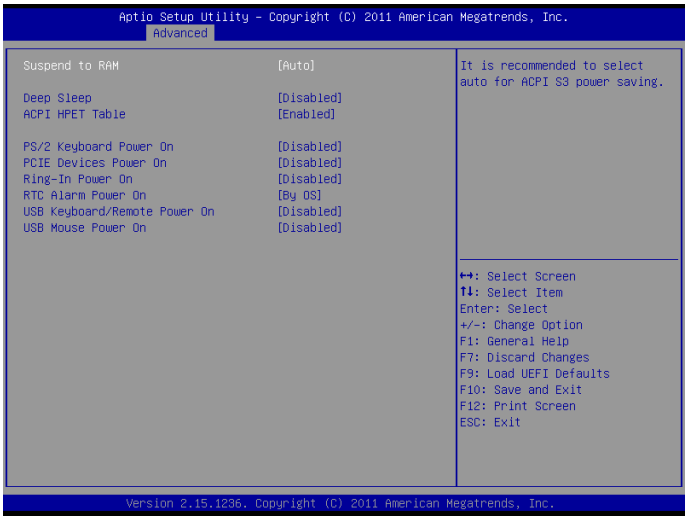
Serial Port

Enable or disable the Serial port.

Serial Port Address

Select the address of the Serial port.

4.4.5 ACPI Configuration



Suspend to RAM

It is recommended to select auto for ACPI S3 power saving.

Deep Sleep

Configure deep sleep mode for power saving when the computer is shut down.

ACPI HPET Table

Enable the High Precision Event Timer for better performance and to pass WHQL tests.

PS/2 Keyboard Power On

Allow the system to be waked up by a PS/2 Keyboard.

PCIE Devices Power On

Allow the system to be waked up by a PCIE device and enable wake on LAN.

Ring-In Power On

Allow the system to be waked up by onboard COM port modem Ring-In signals.

RTC Alarm Power On

Allow the system to be waked up by the real time clock alarm. Set it to By OS to let it be handled by your operating system.

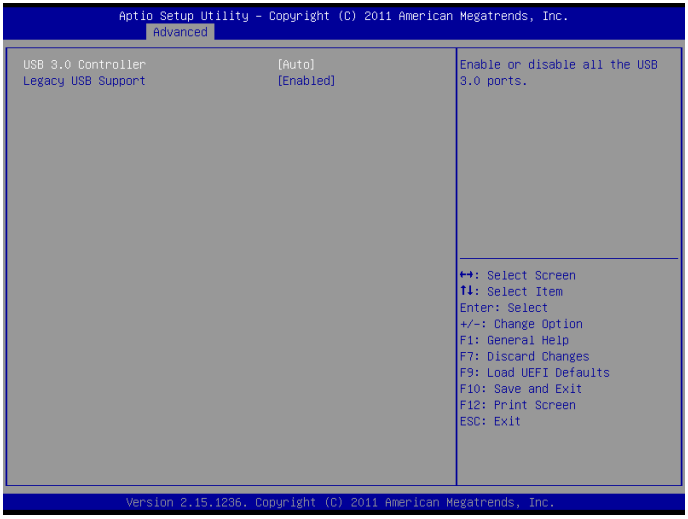
USB Keyboard/Remote Power On

Allow the system to be waked up by an USB keyboard or remote controller.

USB Mouse Power On

Allow the system to be waked up by an USB mouse.

4.4.6 USB Configuration



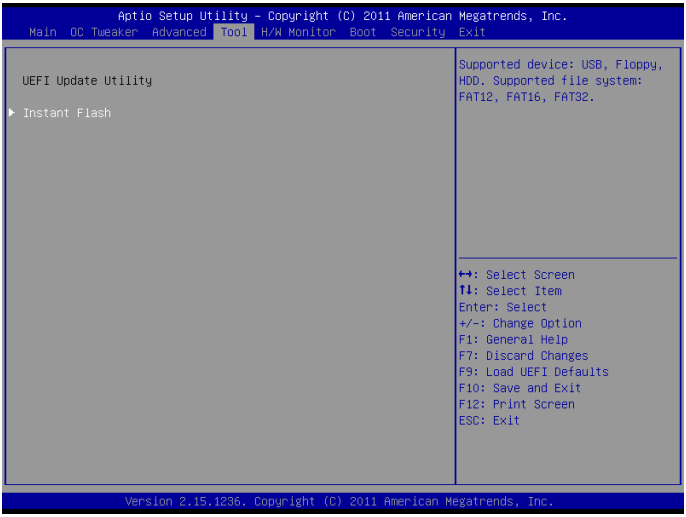
USB 3.0 Controller

Enable or disable all the USB 3.0 ports.

Legacy USB Support

Enable or disable Legacy OS Support for USB 2.0 devices. If you encounter USB compatibility issues it is recommended to disable legacy USB support. Select UEFI Setup Only to support USB devices under the UEFI setup and Windows/Linux operating systems only.

4.5 Tools

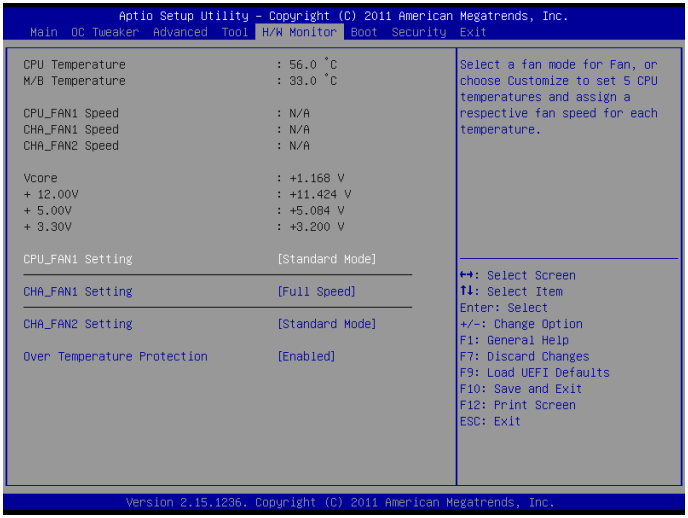


Instant Flash

Save UEFI files in your USB storage device and run Instant Flash to update your UEFI.

4.6 Hardware Health Event Monitoring Screen

This section allows you to monitor the status of the hardware on your system, including the parameters of the CPU temperature, motherboard temperature, fan speed and voltage.



CPU_FAN1 Setting

Select a fan mode for CPU Fan 1, or choose Customize to set 5 CPU temperatures and assign a respective fan speed for each temperature.

CHA_FAN1 Setting

Select a fan mode for Chassis Fan 1, or choose Customize to set 5 CPU temperatures and assign a respective fan speed for each temperature.

CHA_FAN2 Setting

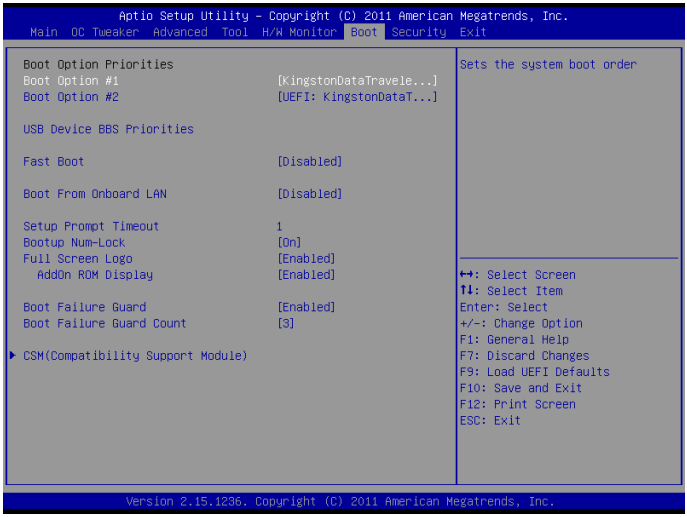
Select a fan mode for Chassis Fan 2, or choose Customize to set 5 CPU temperatures and assign a respective fan speed for each temperature.

Over Temperature Protection

When Over Temperature Protection is enabled, the system automatically shuts down when the motherboard is overheated.

4.7 Boot Screen

This section displays the available devices on your system for you to configure the boot settings and the boot priority.



Fast Boot

Fast Boot minimizes your computer's boot time. In fast mode you may not boot from an USB storage device. Ultra Fast mode is only supported by Windows 8 and the VBIOS must support UEFI GOP if you are using an external graphics card. Please notice that Ultra Fast mode will boot so fast that the only way to enter this UEFI Setup Utility is to Clear CMOS or run the Restart to UEFI utility in Windows.

Boot From Onboard LAN

Allow the system to be waked up by the onboard LAN.

Setup Prompt Timeout

Configure the number of seconds to wait for the setup hot key.

Bootup Num-Lock

Select whether Num Lock should be turned on or off when the system boots up.

Full Screen Logo

Enable to display the boot logo or disable to show normal POST messages.

AddOn ROM Display

Enable AddOn ROM Display to see the AddOn ROM messages or configure the AddOn ROM if you've enabled Full Screen Logo. Disable for faster boot speed.

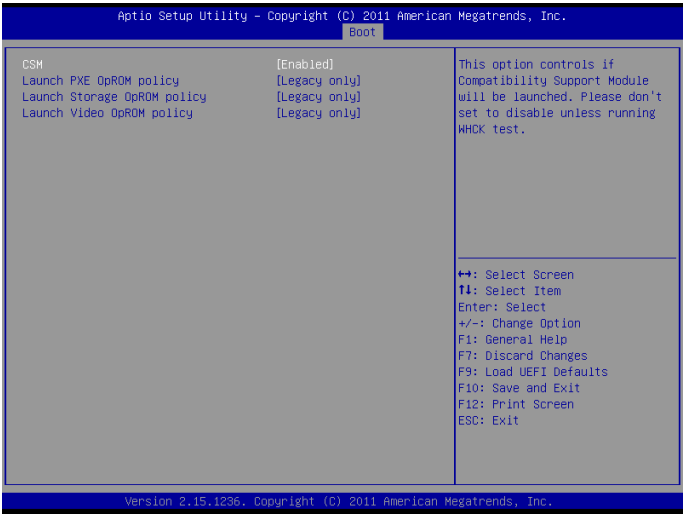
Boot Failure Guard

If the computer fails to boot for a number of times the system automatically restores the default settings.

Boot Failure Guard Count

Configure the number of attempts to boot until the system automatically restores the default settings.

CSM (Compatibility Support Module)



CSM

Enable to launch the Compatibility Support Module. Please do not disable unless you're running a WHCK test. If you are using Windows 8 64-bit and all of your devices support UEFI, you may also disable CSM for faster boot speed.

Launch PXE OpROM Policy

Select UEFI only to run those that support UEFI option ROM only. Select Legacy only to run those that support legacy option ROM only. Do not launch?

Launch Storage OpROM Policy

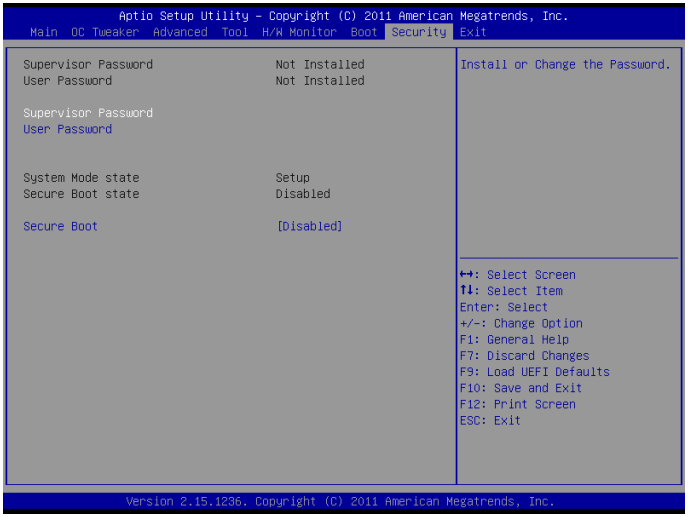
Select UEFI only to run those that support UEFI option ROM only. Select Legacy only to run those that support legacy option ROM only. Do not launch?

Launch Video OpROM Policy

Select UEFI only to run those that support UEFI option ROM only. Select Legacy only to run those that support legacy option ROM only. Do not launch?

4.8 Security Screen

In this section you may set or change the supervisor/user password for the system. You may also clear the user password.



Supervisor Password

Set or change the password for the administrator account. Only the administrator has authority to change the settings in the UEFI Setup Utility. Leave it blank and press enter to remove the password.

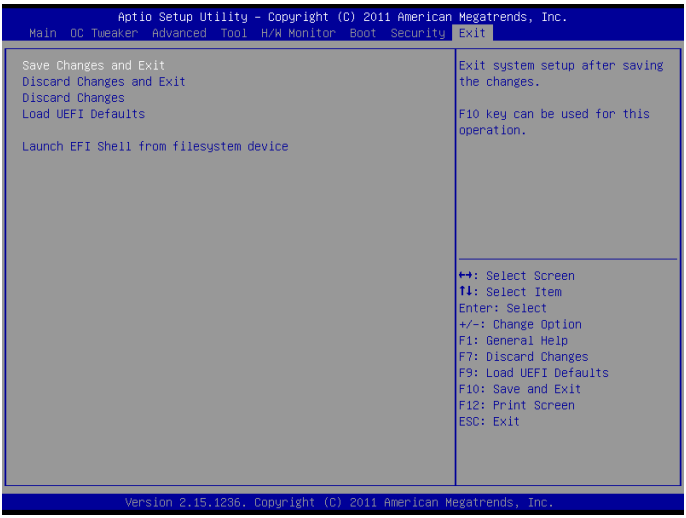
User Password

Set or change the password for the user account. Users are unable to change the settings in the UEFI Setup Utility. Leave it blank and press enter to remove the password.

Secure Boot

Enable to support Windows 8 Secure Boot.

4.9 Exit Screen



Save Changes and Exit

When you select this option the following message, "Save configuration changes and exit setup?" will pop out. Select [OK] to save changes and exit the UEFI SETUP UTILITY.

Discard Changes and Exit

When you select this option the following message, "Discard changes and exit setup?" will pop out. Select [OK] to exit the UEFI SETUP UTILITY without saving any changes.

Discard Changes

When you select this option the following message, "Discard changes?" will pop out. Select [OK] to discard all changes.

Load UEFI Defaults

Load UEFI default values for all options. The F9 key can be used for this operation.

Launch EFI Shell from filesystem device

Copy shellx64.efi to the root directory to launch EFI Shell.

Contact Information

If you need to contact ASRock or want to know more about ASRock, you're welcome to visit ASRock's website at http://www.asrock.com; or you may contact your dealer for further information. For technical questions, please submit a support request form at http://www.asrock.com/support/tsd.asp

ASRock Incorporation

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DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2.1077(a)

Responsible Party Name: ASRock Incorporation

Address: 13848 Magnolia Ave, Chino, CA91710

Phone/Fax No: +1-909-590-8308/+1-909-590-1026

hereby declares that the product

Product Name : Motherboard

Model Number : QC7000M / QC6000M

Conforms to the following specifications:

☒ FCC Part 15, Subpart B, Unintentional Radiators

Supplementary Information:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Representative Person's Name: **James**

Signature :

Date : **May 12, 2017**

EU Declaration of Conformity

For the following equipment:

Motherboard

(Product Name)

QC7000M / QC6000M / ASRock

(Model Designation / Trade Name)

ASRock Incorporation

(Manufacturer Name)

2F., No.37, Sec. 2, Jhongyang S. Rd., Beitou District, Taipei City 112, Taiwan (R.O.C.)

(Manufacturer Address)

☒ **EMC —Directive 2014/30/EU (from April 20th, 2016)**

☐ EN 55022:2010/AC:2011 Class B
☒ EN 55024:2010/A1:2015
☒ EN 55032:2012+AC:2013 Class B
☒ EN 61000-3-3:2013
☒ EN 61000-3-2:2014

☐ **LVD —Directive 2014/35/EU (from April 20th, 2016)**

☐ EN 60950-1 : 2011+ A2: 2013
☐ EN 60950-1 : 2006/A12: 2011

☒ RoHS — Directive 2011/65/EU
☒ CE marking

(EU conformity marking)

CE

ASRock EUROPE B.V.

(Company Name)

Bijsterhuizen 1111 6546 AR Nijmegen The Netherlands

(Company Address)

Person responsible for making this declaration:

(Name, Surname)

A.V.P

(Position / Title)

December 27, 2019

(Date)

P/N: 15G06218800xxx V1.0